

In the Claims

Claims are amended as follows:

1. (currently amended) A radio communications device comprising
 - (i) a plurality of antenna elements; and
 - (ii) a combiner arranged to adaptively combine said antenna elements such that two or more diverse directional antenna beams are provided to receive two or more inputs which are diverse; said combiner being arranged to couple said inputs to two or more receive chains; and
wherein there are more antenna elements than receive chains.
2. (original) A radio communications device as claimed in claim 1 which is a multiple-input multiple-output (MIMO) communications device and wherein the combiner is arranged such that the two or more directional antenna beams are suitable for MIMO communications.
3. (currently amended) A radio communications device as claimed in claim 1 ~~which is selected from~~ in the form of a user terminal ~~and a basestation.~~
4. (original) A radio communications device as claimed in claim 1 wherein said antenna beams are diverse as a result of any of polarisation diversity, angle diversity and space diversity.
5. (original) A radio communications device as claimed in claim 1 wherein said combiner comprises at least one beamformer.
6. (original) A radio communications device as claimed in claim 1 wherein at least some of said antenna elements are provided as a phased array.

7. (original) A radio communications device as claimed in claim 1 wherein a pair of antenna beams are provided with substantially orthogonal polarisations and at substantially similar directions.

8. (currently amended) A radio communications device as claimed in claim 7 wherein a second pair of antenna beams is provided also with substantially orthogonal polarisations to one another and at substantially similar directions but being at a different direction from the first said pair of antenna beams.

9. (original) A radio communications device as claimed in claim 1 wherein said combiner is arranged to electronically steer the directional antenna beams.

10. (original) A communications network comprising a plurality of radio communications devices as claimed in claim 1.

11. (currently amended) A method of operating a radio communications device comprising the steps of:

- (i) receiving radio signals at a plurality of antenna elements by;
- (ii) using a combiner to adaptively combine the antenna elements such that they are operable in at least one direction to receive two or more diverse channels inputs and coupling said inputs to two or more receive chains; and
wherein there are more antenna elements than receive chains.

12. (original) A method as claimed in claim 11 wherein said radio communications device is a multiple-input multiple-output communications device and wherein said received signals are space-time coded and said diverse channels are multiple-input multiple-output channels.

13. (currently amended) A method of operating a radio communications device comprising the steps of:

- (i) transmitting radio signals from a plurality of antenna elements by;
- (ii) processing signals on two or more transmit chains to produce two or more processed signals; and
- ~~(ii)~~ (iii) using a combiner to adaptively combine the antenna elements such that they are operable in at least one direction to transmit the two or more diverse channels processed signals as diverse outputs; and
- wherein there are more antenna elements than transmit chains.

14. (original) A method of operating a radio communications device as claimed in claim 13 which is a multiple-input multiple-output communications device and wherein said radio signals are space-time coded and said diverse channels are multiple-input multiple-output channels.